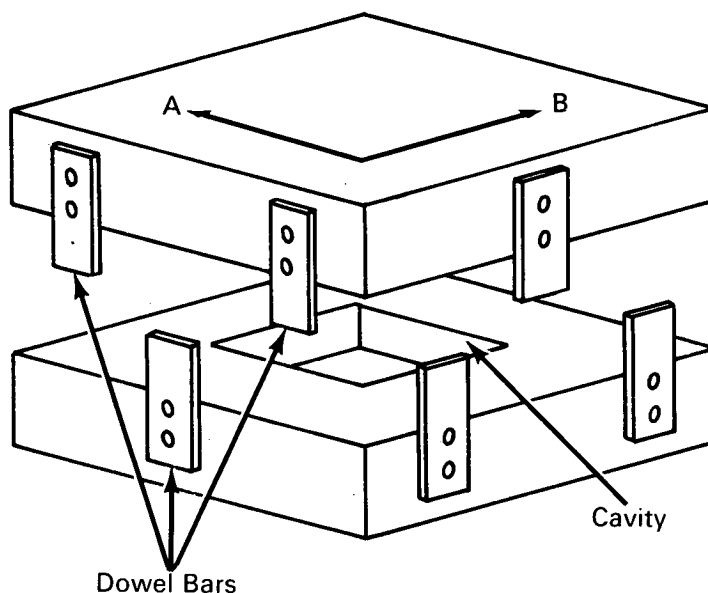


NASA TECH BRIEF



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Precision Metal Molding



The problem:

To provide precise alignment for metal-forming dies while permitting minimal thermal expansion without die warpage or cavity space restriction.

The solution:

An arrangement of interfacing dowel bars and die side facings so designed that the dies are restrained in one orthogonal angle while being permitted to thermally expand in the opposite orthogonal angle.

How it's done:

Adjacent sides of the mating dies are ground to receive dowel bars arranged in a mutually restraining pattern. Lateral expansion within small tolerance is

then possible in the directions A and B away from the restraining dowel bars.

Note:

This development is in conceptual stage only, and as of the date of publication of this Tech Brief, neither a model nor prototype has been constructed.

Patent status:

No patent action is contemplated by NASA.

Source: A. Townhill
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Category 05